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Photocurable compsn. contg. epoxy resin, carboxylic acid anhydride - and cpds. liberating Lewis acid on irradiation and by heating

Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ ) Number of Countries: 001 Number of Patents: 002

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Abstract (Basic): JP 56053129 A

Compsn. (100 wt.pts.) comprises (A) epoxy resin contg. 2 epoxy gps. and (B) a polyfunctional carboxylic acid anhydride copolymerisable with the resin (e.g. (tetrahydro)phthalic, hexahydrophthalic, maleic, methyl tetrahydrophthalic; (dodecenyl) succinic, methyl succinic, citroconic, trimellitic and pyromellitic anhydrides (0.8 mols per mol of epoxy group in the resin) is blended with (C) a cpd. liberating a Lewis acid on irradiation with light or radioactive rays (e.g. diazonium salts of Lewis acids of formula (I)). (MXn is a complexed anion, S is a halo (e.g. F and Cl) M is a transition metal (e.g. Sb, Fe, Sn, Bi, Al, Ga, In, Ti, Zr, Sc, V, Cr, Mn or Co) or a metalloid (e.g. B, P and S) (e.g. BF4(-), PF6(-), AsF6(-), SbF6(-), FeCl4(-), SnCl6(-), SbCl6(-) and BiCl5(--) and Y is NO2, OH, halo, N-morpholino, alkyl, alkoxy, amino, aryl(amino) or arylmercapto and m is an integer, or a diaryliodonium Lewis acid of formula (II). R1 is R2 is Y, or a Lewis acid triphenylonium salt of formula (III) (Q1) is S, Se, Si and Sn, or a triphenyl-alkyl, -alkoxy or -aryl onium salt of Lewis acids of formula (IV) Q2 is P, N or Sb and R3 is an alkyl, alkoxy or aryl) (0.05-5 wt.pts.) and (D) a cpd. liberating a Lewis acid by heating it (e.g. BF3/amine complexes) (0.05-5 wt.pts.).

The epoxy resin compsns. are curable by irradiation with light or radioactive rays.

Title Terms: PHOTOCURABLE; COMPOSITION; CONTAIN; EPOXY; RESIN; CARBOXYLIC; ACID; ANHYDRIDE; COMPOUND; LIBERATING; LEWIS; ACID; IRRADIATE; HEAT Derwent Class: A21; A60; A89; E12; G06

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